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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/498,525	02/04/2000	Hammam Elabd	73234	8921
27498	7590	07/30/2004	EXAMINER	
PILLSBURY WINTHROP LLP 2475 HANOVER STREET PALO ALTO, CA 94304-1114			VO, LILIAN	
			ART UNIT	PAPER NUMBER
			2127	

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/498,525

Applicant(s)

ELABD, HAMMAM

Examiner

Lilian Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 8, 10 - 14 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 8, 10 - 14 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 8, 10 – 14 and 33 are pending. Claims 9 and 15 – 32 have been canceled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 7, 8, 11, 12, 14 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,440,740, hereinafter Chen) in view of Morton (US 5,822,606).

4. Regarding **claim 1**, Chen discloses a system for providing parallel processing of data to a plurality of digital signal processors (DSPs) (fig. 32, col. 31, lines 26 – 33), comprising:

means for transmitting communication data to a load management system from at least one CPU (col. 2, lines 34 – 35), wherein the load management system includes:

a plurality of direct memory access (DMA) devices (col. 2, lines 31 – 33, fig. 32);
a plurality of DSP interfaces for interfacing the plurality of DSPs with the plurality of DMA devices (col. 2, lines 31 – 33, fig. 32);

means for selecting two or more DSPs from a plurality of DSPs for processing the communication data (col. 31, lines 26 – 33, fig. 32);

means for processing the communication data using the selected two ore more DSPs (col. 2, lines 29 – 35, col. 31, lines 26 – 33, fig. 32); and

means for transmitting the processed communication data back to the at least one CPU and to a communication device (col. 2, lines 34 – 35).

Chen however did not clearly disclose the additional limitations as claimed.

Nevertheless, Morton disclosed the feature in which each DMA device having one or more internal registers, one or more FIFOs (col. 9, line 64 – col. 10, line 2, lines 18 – 25, col. 11, lines 10 – 33, lines 59 - 67), and a state machine associated with the one ore more FIFOs (col. 10, lines 63 – 67), a memory interface for interfacing the plurality of DMA devices with an external memory devices (col. 9, lines 52 - 67), a plurality of status and controls registers coupled to the plurality of DMA devices (col. 10, lines 18 – 25, col. 11, lines 25 – 33, 59 – 67); at least one CPU interface for interfacing the at least one CPU with the plurality of status and control registers (col. 19, lines 19 – 29 and fig. 6). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to implement Chen's system with the additional feature as shown in Morton to enhance the system performance.

5. Regarding **claim 5**, Chen discloses a system of claim 1, wherein the communication data is transmitted from an encoder/decoder (col. 5, lines 20 – 33, 64 – 67, fig. 2, converter 47)

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6. Regarding **claim 7**, Chen did not disclose the additional limitation as claimed.

Nevertheless, Morton discloses the communication data is transmitted from an image processing medium (col. 7, lines 55 – 60, col. 8, lines 19 - 26). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to implement Chen's system with the additional feature as shown in Morton to allow the system to process more variety type of data.

7. Regarding **claim 8**, Chen discloses a system of claim 1, wherein the communication data is transmitted from a data modem (col. 5, lines 7 – 13, 24 - 33).

8. Regarding **claim 11**, Chen did not disclose the additional limitation as claimed.

Nevertheless, Morton discloses an external memory, wherein the external memory is coupled to the plurality of DSPs through dedicated memory threads (col. 9, lines 59 – 67, fig. 5). It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to implement Chen's system with the additional feature as shown in Morton to allow the system to process more variety type of data.

9. Regarding **claim 12**, Chen did not clearly disclose the additional limitation as claimed.

Nevertheless, Morton discloses the CPU interface includes a routing MUX (col. 23, lines 46 – 55), wherein the routing MUX is coupled to the external memory device (col. 9, lines 60 – 64, col. 23, lines 46 – 55). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate these components to the system of Chen to enhance the transmission of communication data.

10. Regarding **claim 14**, Chen did not clearly disclose the additional limitation as claimed. Nevertheless, Morton discloses the external memory device in fig. 5. It would have been obvious for one of ordinary skill in the art, at the time of the invention was made to combine Morton's teaching with Chen to enhance the system performance by managing the memory in the device to ensure there is enough space for data processing.

11. **Claim 33** is rejected on the same ground as stated above.

12. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,440,740, hereinafter Chen) in view of Morton (US 5,822,606) as applied to claim 1 above, and further in view of Applicant's admitted prior art.

13. Regarding **claim 2**, the combination of Chen and Morton's teaching did not clearly disclose the additional limitation as claimed. Nevertheless, applicant's admitted prior art discloses that the communication data is transmitted from a VoIP medium (specification page 2, lines 4 – 7). It would have been obvious for one of ordinary skill in the art, at the time of the invention was made to incorporate this feature to Chen and Morton so that it can be feasible to support a number of diverse applications.

14. Regarding **claim 6**, the combination of Chen and Morton's teaching did not clearly disclose the additional limitation as claimed. Nevertheless, applicant's admitted prior art

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discloses that the communication data is transmitted from a broadband communication medium (specification page 2, lines 15 – 17, page 4, lines 7 - 10). It would have been obvious for one of ordinary skill in the art, at the time of the invention was made to incorporate this feature to Chen and Morton to enhance the transmission of the communication data.

15. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,440,740, hereinafter Chen) in view of Morton (US 5,822,606) as applied to claim 1 above, and further in view of MacMillan et al (US 6,278,707, hereinafter MacMillan).

16. Regarding **claim 3**, the combination of Chen and Morton's teaching did not clearly disclose the additional limitation as claimed. Nevertheless, MacMillan discloses the communication data is transmitted from FOIP (col. 9, lines 45 – 54). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to the combination of Chen and Morton for the capability of supporting a number of diverse applications (MacMillan: col. 9, lines 45 – 46).

17. Regarding **claim 4**, the combination of Chen and Morton's teaching did not clearly disclose the additional limitation as claimed. Nevertheless, MacMillan discloses the communication data is transmitted from an IP to sonnet medium in fig. 6 and col. 6, lines 22 – 30. It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Chen and Morton to provide the connection to system in a variety of forms.

18. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,440,740, hereinafter Chen) in view of Morton (US 5,822,606) as applied to claim 1 above, and further in view of Honary et al (US Pat. Application publication 2003/00464459 A1, hereinafter Honary).

19. Regarding **claim 10**, Morton discloses the DSP interface includes a program/data memory (fig. 1). Both Chen and Morton however did not clearly disclose of the ping-pong memory. Nevertheless, Honary discloses of a ping-pong memory in the abstract. It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate ping-pong memory to the combination of Chen and Morton's system to maximize the processing efficiency of the plurality of image data (Honary: paragraph 0009).

20. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5,440,740, hereinafter Chen) in view of Morton (US 5,822,606) as applied to claim 1 above, and further in view of Chauvel et al. (US Pat application publication 2002/0078319 A1, hereinafter Chauvel).

21. Regarding **claim 13**, the combination of Chen and Morton's teaching did not clearly disclose the additional limitation as claimed. Nevertheless Chauvel discloses the external memory device comprises a memory access controller array in page 2 – 3, paragraph 0037. It would have been obvious for one of ordinary skill in the art, at the time the invention was made

to incorporate the component as described in Chauvel to Chen and Morton to manage memory access in the external memory device.

Response to Arguments

22. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

23. In response to applicant's argument (page 11, 1st and 2nd paragraphs) that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, some of the motivations are from the knowledge generally available to one of an ordinary skill in art and other are found in the references as cited in the rejection above.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Acton et al. (US Pat. Application Publication 2001/0052056 A1) and Viswanadham et al. (US Pat. Application Publication 2001/0043614 A1) disclose a system that has a state machine associated with the FIFOs.

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25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 703-305-7864. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo
Examiner
Art Unit 2127

lv
July 21, 2004



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